Amendments to the Claims

1   1. (currently amended) A three-dimensional television system, comprising:

2   an acquisition stage, comprising:

3   a plurality of video cameras, each video camera configured to

4   acquire a video of a dynamically changing scene in real-

5   time;

6   means for synchronizing the plurality of video cameras; and

7   a plurality of producer modules connected to the plurality of

8   video cameras, the ~~producers~~ producer modules

9   configured to compress the videos to compressed videos

10   and to determine viewing parameters of the plurality of

11   video cameras;

12   a display stage, comprising:

13   a plurality of decoder modules configured to decompress the

14   compressed videos to uncompressed videos;

15   a plurality of consumer modules configured to generate a

16   plurality of output videos from the decompressed videos;

17   a controller configured to broadcast the viewing parameters to

18   the plurality of decoder modules and the plurality of

19   consumer modules;

20   a three-dimensional display unit configured to concurrently

21   display the <u>plurality of</u> output videos <u>onto a single</u>

22   <u>display surface</u> according to the viewing parameters; and

23   means ~~of~~ <u>for</u> connecting the plurality of decoder modules, the

24   plurality of consumer modules, and the ~~plurality of~~

25   ~~display units~~ <u>three-dimensional display unit</u>; and

26   a transmission stage, connecting the acquisition stage to the display

27 stage, configured to transport the plurality of compressed videos and the

28 viewing parameters.

1 2. (currently amended) The system of claim 1, further comprising a plurality

2 of cameras to acquire calibration images displayed on <u>the display surface of</u>

3 the three-dimensional display unit to determine the viewing parameters.

1 3. (original) The system of claim 1, in which the display units are projectors.

1 4. (original) The system of claim 1, in which the display units are organic

2 light emitting diodes.

1 5. (original) The system of claim 1, in which the three-dimensional display

2 unit uses front-projection.

1 6. (original) The system of claim 1, in which the three-dimensional display

2 unit uses rear-projection.

1 7. (original) The system of claim 1, in which the display unit uses two-

2 dimensional display element.

1 8. (currently amended) The system of claim 1, in which the display unit ~~is~~

2 <u>uses a</u> flexible <u>fabric</u>, and further comprising passive display elements.

1 9. (currently amended) The system of claim 1, in which the display unit ~~is~~

2 <u>uses a</u> flexible <u>fabric</u>, and further comprising active display elements.

1 10. (original) The system of claim 1, in which different output images are

2 displayed depending on a viewing direction of a viewer.

1 11. (currently amended) The system of claim 1, in which static view-

2 dependent images of an environment are displayed such that a display

3 surface <u>of the display unit</u> disappears.

1 12. (currently amended) The system of claim 1, in which dynamic view-

2 dependent images of an environment are displayed such that a display

3 surface <u>of the display unit</u> disappears.

1 13. (original) The system of claim 11 or 12, in which the view-dependent

2 images of the environment are acquired by a plurality of cameras.

1 14. (original) The system of claim 1, in which each producer module is

2 connected to a subset of the plurality of video cameras.

1 15. (original) The system of claim 1, in which the plurality of video cameras

2 are in a regularly spaced linear and horizontal array.

1 16. (original) The system of claim 1, in which the plurality of video cameras

2 are arranged arbitrarily.

1 17. (original) The system of claim 1, in which an optical axis of each video

2 camera is perpendicular to a common plane, and the up vectors of the

3 plurality of video cameras are vertically aligned.

1 18. (original) The system of claim 1, in which the viewing parameters

2 include intrinsic and extrinsic parameters of the video cameras.

1 19. (original) The system of claim 1, further comprising:

2   means for selecting a subset of the plurality of cameras for acquiring a

3 subset of videos.

1 20. (original) The system of claim 1, in which each video is compressed

2 individually and temporally.

1 21. (original) The system of claim 1, in which the viewing parameters

2 include a position, orientation, field-of-view, and focal plane, of each video

3 camera.

1 22. (currently amended) The system of claim 1, in which the controller

2 determines, for each output pixel $\sout{o(x, y)}$ $\underline{o(u, v)}$ in the output video, a view

3 number v and a position of each source pixel $s(v, x, y)$ in the decompressed

4 videos that contributes to the output pixel in the output video.

1   23. (original) The system of claim 22, in which the output pixel is a linear

2   combination of k source pixels according to

3    $$o(u,v) = \sum_{i=0}^{k} w_i s(v,x,y),$$

4   where blending weights w_i are predetermined by the controller based on the

5   viewing parameters.

1   24. (original) The system of claim 22, in which a block of the source pixels

2   contribute to each output pixel.

1   25. (original) The system of claim 1, in which the three-dimensional display

2   unit includes a display-side lenticular sheet, a viewer-side lenticular sheet, a

3   diffuser, and substrate between each lenticular sheets and the diffuser.

1   26. (original) The system of claim 1, in which the three-dimensional display

2   unit includes a display-side lenticular sheet, a reflector, and a substrate

3   between the lenticular sheets and the reflector.

1   27. (currently amended) The system of claim 1, in which an arrangement of

2   the cameras and an arrangement of the display units, with respect to the

3   display unit, are substantially identical, and the number of cameras and the

4   number of display units is greater than two.

1   28. (currently amended) The system of claim 1, in which the plurality of

2   cameras acquire ~~high-dynamic range videos~~ the video of high dynamic light-

3   fields.

1   29. (currently amended) The system of claim 1, in which the display units

2   display ~~high-dynamic range images of~~ the output videos <u>as high dynamic</u>

3   <u>light-fields</u>.

     30. (canceled)

     31. (canceled)